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Substitute for form 1449A/PTO

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Sheet	1	of	7
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Application Number	09/724,319
Filing Date	November 27, 2000
First Named Inventor	Schenk, D. B.
Art Unit	1649
Examiner Name	Lyles
Attorney Docket Number	15270J-004743US

U.S. PATENT DOCUMENTS

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Date Considered

4-29-06

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FOREIGN PATENT DOCUMENTS

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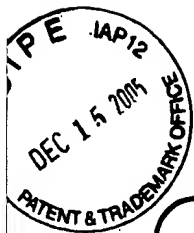
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		First Named Inventor	Schenk, D. B.		
		Art Unit	1649		
		Examiner Name	Lyles		
Sheet	3	of	7	Attorney Docket Number	15270J-004743US

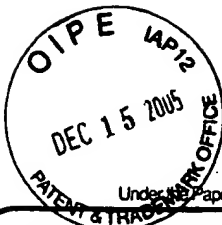
OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
80	663	ALBERTS et al., eds. <i>Molecular Biology of The Cell</i> , Third Edition, chapter 23, pages 1208-1209 (1994).	
	649	AMIT et al., "Three-Dimensional Structure of an Antigen-Antibody Complex at 2.8 Å Resolution," <i>Science</i> , 233:747-753 (1986).	
	588	ANDERSON, J. P., "Exact cleavage site of Alzheimer amyloid precursor in neuronal PC-12 cells," <i>Neuroscience Letters</i> , 128(1):126-128 (1991).	
	589	ANDERSON, M. W., "Amending the amyloid hypothesis," <i>The Scientist</i> , 18(20):28-29 (2004).	
	677	ANKARCRONA et al., "Biomarkers for apoptosis in Alzheimer's disease," <i>Int. J. Geriatric Psychiatry</i> , 20:101-105 (2005).	
80	590	BACSKAI et al., "Non-Fc-mediated mechanisms are involved in clearance of amyloid-β in vivo by immunotherapy," <i>J. Neurosci.</i> , 22(18):7873-7878 (2002).	
	639	Chimicon International, "Mouse Anti-Amyloid Beta Protein Monoclonal Antibody," Catalog # MAB1561 <i>no publication date</i>	
80	591	CHROMY et al., "Self-assembly of Aβ(1-42) into globular neurotoxins," <i>Biochemistry</i> , 42(44):12749-12760 (2003).	
	592	CITRON et al., "Evidence that the 42- and 40- amino acid forms of amyloid-β protein are generated from the β-amyloid precursor protein by different protease activities," <i>PNAS</i> , 93(23):13170-13175 (1996).	
	593	CITRON, M., "Alzheimer's disease: treatments in discovery and development," <i>Nat. Neurosci.</i> , 5:1055-1057 (2002).	
	594	DEMATTOIS et al., "Brain to plasma amyloid-β efflux: a measure of brain amyloid burden in a mouse model of Alzheimer's disease," <i>Science</i> , 295(5563):2264-2267 (2002).	
	595	DODART et al., "Immunization reverses memory deficits without reducing brain Aβ burden in Alzheimer's disease model," <i>Nat. Neurosci.</i> , 5(5):452-457 (2002).	
	596	DODEL et al., "Immunotherapy for Alzheimer's disease," <i>Lancet Neurol.</i> , 2(4):215-220 (2003).	
80	597	DOVEY et al., "Functional gamma-secretase inhibitors reduce beta-amyloid peptide levels in brain," <i>J. Neurochem.</i> , 76(1):173-181 (2001).	

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		Application Number	09/724,319
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Filing Date	November 27, 2000
		First Named Inventor	Schenk, D. B.
		Art Unit	1649
		Examiner Name	Lyles
		Attorney Docket Number	15270J-004743US
Sheet	4	of	7

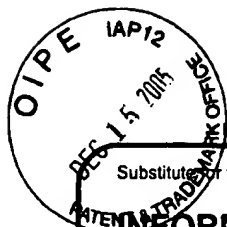
598	DUFF et al., "Increased amyloid- β 42(43) in brains of mice expressing mutant presenilin 1," <u>Nature</u> , 383(6602):710-713 (1996).
599	ERIKSEN et al., "NSAIDs and enantiomers of flurbiprofen target γ -secretase and lower A β 42 in vivo," <u>J. Clin. Invest.</u> , 112(3):440-449 (2003).
600	FINDEIS, M. A., "Approaches to discovery and characterization of inhibitors of amyloid β -peptide polymerization," <u>Biochem. Biophys. Acta</u> , 1502(1):76-84 (2000).
650	FOOTE et al., "Antibody Framework Residues Affecting the Conformation of the Hypervariable Loops," <u>J. Mol. Biol.</u> , 224:487-499 (1992).
601	FRENKEL et al., "Reduction of β -amyloid plaques in brain of transgenic mouse model of Alzheimer's disease by EFRH-phage immunization," <u>Vaccine</u> , 21(11-12):1060-1065 (2003).
602	FRENKEL et al., "Towards Alzheimer's β -amyloid vaccination," <u>Biologicals</u> , 29(3-4):243-247 (2001).
603	GELINAS et al., "Immunotherapy for Alzheimer's disease," <u>PNAS</u> , 101(suppl. 2):14657-14662 (2004).
634	Genbank Accession number AAB48800, "Anti-DNA immunoglobulin light chain IgG [Mus musculus]," 09/14/01.
635	Genbank Accession number CAA46659, "IgE antibody light chain(VJ)," 06/15/93.
636	Genbank Accession number X65775.1, "M.musculus DNA for IgE antibody light chain (VJ)," 06/15/93.
637	Genbank Accession number AAD26773, "Immunoglobulin heavy chain VH3609-JH3 region [Mus musculus]," 04/22/99.
604	GONG et al., "Alzheimer's disease-affected brain: presence of oligomeric A β ligands (ADDLs) suggests a molecular basis for reversible memory loss," <u>PNAS</u> , 100(18):10417-10422 (2003).
605	GREENBERG et al., "Alzheimer disease's double-edged vaccine," <u>Nat. Med.</u> , 9(4):389-390 (2003).
606	HAASS, C., "New hope for Alzheimer disease vaccine," <u>Nat Med.</u> , 8(11):1195-1196 (2002).
664	HARLOW et al., eds., <u>Antibodies: A Laboratory Manual</u> , pages 71-82 (1998).
607	HOCK et al., "Generation of antibodies specific for β -amyloid by vaccination of patients with Alzheimer disease," <u>Nat. Med.</u> , 8(11):1270-1275 (2002).

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		Examiner Name	Lyles		
Sheet	5	of	7	Attorney Docket Number	15270J-004743US

662	IDA et al., "Analysis of Heterogeneous β A4 Peptides in Juman Cerebrospinal Fluid and Blood by a Newly Developed Sensitive Western Blot Assay," <u>J. Biol. Chem.</u> , 271(37):22908-22914 (1996).
608	IRIZARRY et al., "Alzheimer disease therapeutics," <u>J. Neuropathol. Exp. Neurol.</u> , 60(10):923-928 (2001).
609	JANUS et al., "Transgenic mouse models of Alzheimer's Disease," <u>Physiol. Behav.</u> , 73(5):873-886 (2001).
640	JUNG et al., "Alzheimer's Beta-amyloid Precursor Protein Is Expressed on the Surface of Immediately Ex Vivo Brain Cells: a Flow Cytometric Study," <u>J. Neurosci. Res.</u> , 46:336-348 (1996).
628	KOFLER et al., "Mechanism of Allergic Cross-Reactions-III. cDNA Cloning and Variable-Region Sequence Analysis of Two IgE Antibodies Specific for Trinitrophenyl," <u>Mol. Immunology</u> , 29(2):161-166 (1992).
627	KRISHNAN et al., "Correlation Between the Amino Acid Position of Arginine in VH-CDR3 and Specificity for Native DNA Among Autoimmune Antibodies ^{1,2} ," <u>J. Immunol.</u> , 157(6):2430-2439 (1996).
651	LANDOLFI et al., "The Integrity of the Ball-and Socket Joint Between V and C Domains Is Essential for Complete Activity of a Humanized Antibody," <u>J. Immunology</u> , 166(3):1748-1754 (2001).
665	LO et al., "High level expression and secretion of Fc-X fusion proteins in mammalian cells," <u>Protein Engineering</u> , 11(6):495-500 (1998).
666	MANDEL et al., "Clinical trials in neurological disorders using AAV vectors: promises and challenges," <u>Curr. Opin. Mol. Ther.</u> , 6(5):482-490 (2004).
610	MATTSON et al., "Good and bad amyloid antibodies," <u>Science</u> , 301(5641):1845-1849 (2003).
611	MCLAURIN et al., "Therapeutically effective antibodies against amyloid- β peptide target amyloid- β residues and 4-10 and inhibit cytotoxicity and fibrillogenesis," <u>Nat Med.</u> , 8(11):1263-1269 (2002).
612	MONSONEGO et al., "Increased T cell reactivity to amyloid β protein in older humans and patients with Alzheimer's disease," <u>J. Clin. Invest.</u> , 112(3):415-422 (2003).
613	MONSONEGO et al., "Immunotherapeutic approaches to Alzheimer's disease," <u>Science</u> , 302(5646):834-838 (2003).
652	ORLANDI et al., "Cloning immunoglobulin variable domains for expression by the polymerase chain reaction," <u>PNAS</u> , 86:3833-3837 (1989).
614	PAGANETTI et al., "Amyloid precursor protein truncated at any of the γ -secretase sites is not cleaved to β -amyloid," <u>J. Neurosci. Res.</u> , 46(3):283-293 (1996).

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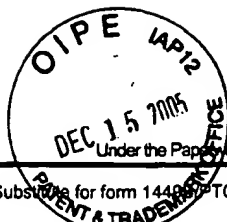
80	615	PALLITTO et al., "Recognition sequence design for peptidyl modulators of β -amyloid aggregation and toxicity," <i>Biochemistry</i> , 38(12):3570-3578 (1999).	
	654	PANKA et al., "Variable region framework differences result in decreased or increased affinity of variant anti-digoxin antibodies," <i>PNAS</i> , 85:3080-3084 (1998).	
	653	PAUL, W. E., eds., <i>Fundamental Immunology</i> , Third Edition, pages 292-295, Raven Press, New York (1993).	
	616	PFEIFER et al., "Cerebral hemorrhage after passive anti-A β immunotherapy," <i>Science</i> , 298(5597):1379 (2002).	
	641	RACKE et al., "Exacerbation of Cerebral Amyloid Angiopathy-Associated Microhemorrhage in Amyloid Precursor Protein Transgenic Mice by Immunotherapy Is Dependent on Antibody Recognition of Deposited Forms of amyloid β ," <i>J. Neurosci.</i> , 25(3):629-636 (2005).	
	638	Research Corporation Technology News, "THP and SangStat Partner to Develop Humanized Polyclonal Antibody Drugs," 11/11/02.	
	626	"Researchers Develop Blood Test to Diagnose Alzheimer's- Type Changes in Mice," downloaded from www.businesswire.com on 12/15/04.	
	655	RUDIHOFF et al., "Single amino acid substitution altering antigen-binding specificity," <i>PNAS</i> , 79:1979-1983 (1982).	
	617	SCHMID, R. E., "Study suggest Alzheimer vaccine fix," from www.msnbc.com/news, pages 1-5 (2002).	
	629	SEIDL et al., "Predominant V _H genes expressed in innate antibodies are associated with distinctive antigen-binding sites," <i>PNAS</i> , 96:2262-2267 (1999).	
	618	SELKOE, D. J., "Alzheimer's disease is a synaptic failure," <i>Science</i> , 298(5594):789-791 (2002).	
	622	SERGEANT et al., "Truncated beta-amyloid peptide species in pre-clinical Alzheimer's disease as new targets for the vaccination approach," <i>J. Neurochem.</i> , 85(6):1581-1591 (2003).	
	620	SOLOMON, B., "Generation and brain delivery of anti-aggregating antibodies against β -amyloid plaques using phage display technology," <i>J. Neural Transm. Suppl.</i> , 62:321-325 (2002).	
	621	SOLOMON, B., "Immunotherapeutic strategies for prevention and treatment of Alzheimer's disease," <i>DNA and Cell Biology</i> , 20(11):697-703 (2001).	
	678	SOUDER et al., "Overview of Alzheimer's disease," <i>Nurs. Clin. N. Am.</i> , 39:545-559 (2004).	
80	623	WALSH et al., "Naturally secreted oligomers of amyloid β protein potently inhibit hippocampal long-term potentiation in vivo," <i>Nature</i> , 416(6880):535-539 (2002).	

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 7 of 7

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624	WASHINGTON UNIVERSITY IN ST. LOUIS SCHOOL OF MEDICINE, "Study gives Clues to Working of Anti-Alzheimer Antibody," downloaded from www.medicine.wustl.edu/~wumpa/news on 12/15/04.	
676	Webster's New World Dictionary, page 1387, therapeutic (1988).	
625	WHITE et al., "Immunotherapy as a therapeutic treatment for neurodegenerative disorders," <u>J. Neurochem.</u> , 87(4):801-808 (2003).	
580	ZLOKOVIC et al., "Glycoprotein 330/megalin: probable role in receptor-mediated transport of apolipoprotein J alone and in a complex with Alzheimer disease amyloid beta at the blood-brain and blood-cerebrospinal fluid barriers," <u>PNAS</u> , 93(9):4229-4334 (1996) abstract only.	

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